# METEOROLOGICAL SUMMARY FOR BRAZIL, JANUARY, 1928

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The secondary atmospheric circulation was rather abnormal; low pressure showed frequency and persistence that is not normal for this period of the year. Temperatures were generally high, especially in central Brazil, where there were periods of hot weather. In this region the rains were of torrential character and caused disastrous floods in certain rivers. Strong winds accompanying the areas of low pressure swept the southern part of the country during several periods and at times assumed the proportions of tempests, especially on the coast.

Rainfall was light in the northern and central regions; the deficiencies for these regions were 1.54 and 1.77 inches, respectively. In the southern region the precipitation was irregular with an average deficiency 0.98 inch.

Abundant rainfall in central Brazil during the last decade of the month was injurious to crops. The general condition of cotton, coffee, tobacco, cereals, and vegetables is good; that of sugar cane is bad. The harvesting of sugar cane and cereals is progressing, the gathering of cacao and the picking of cotton in the northern region have been completed. The soil is being prepared for cotton, cereals, sugar cane, and tobacco.

At Rio de Janeiro the weather was generally fine with only one period of rainy weather—28th to 31st. The means for pressure and temperature were slightly below normal. The rains were about normal excepting a fall of 2.58 inches on the 28th. The winds were generally fresh, moving predominantly from the southern quadrants. The maximum wind velocity was over 36 miles per hour from the south on the evening of the 28th.

## NOTES

*The influence of climatic conditions on the yield of wool in Argentina.—(By Guillermo Hoxmark [translated and abstracted by G. B. Diehl]).*—Argentina is one of the foremost countries in the production of wool-bearing animals. According to the 1922 census it figured as third, and was superceded only by Australia and the United States. Consequently, Argentina's production of wool is of considerable importance in the world market.

In Table 1 are given eight countries which raise the largest number of sheep, according to the census of 1922.

TABLE 1

| Countries | Number of head of wool-bearing animals | Countries | Number of head of wool-bearing animals |
|---|---|---|---|
| Australia | 78, 803, 261 | New Zealand | 22, 222, 259 |
| United States | 36, 327, 000 | British India | 22, 082, 353 |
| Argentina | 36, 208, 981 | Great Britain | 20, 621, 165 |
| Russia | 31, 911, 200 | Spain | 19, 377, 427 |

The difference between the number raised in Argentina and the United States is insignificant, and it may be said that both of these countries rank second in the production of sheep in the world.

Variations in yields are important. For example, in Buenos Aires, the shearing of 1920–21 gave 3,500 grams as the mean weight of wool, and in 1925–26 the weight of this increased to 6,882 grams, making a difference of 3,332 grams between the yields from the two shearings. In Cordoba, there is a difference between the shearings of 1920–21 and 1925–26 of 4,100 grams, in favor of the last shearing.

With a view to investigating the influence of temperature on yield, Table 2 is given, by means of which the shearing results obtained during the five-year period 1920–21 to 1925–26 are shown.

TABLE 2

| Provinces and States | Mean weight of wool | Indicator numbers | Mean annual temperature |
|---|---|---|---|
| | *Grams* | | *°C.* |
| Rio Negro | 4, 446 | 1, 000 | 12. 7 |
| Buenos Aires | 4, 431 | 1, 004 | 15. 3 |
| Chubut | 4, 094 | 1, 086 | 10. 1 |
| La Pampa | 3, 777 | 1, 177 | 15. 3 |
| Santa Fe | 3, 262 | 1, 363 | 18. 5 |
| Cordoba | 3, 210 | 1, 385 | 17. 4 |
| La Rioja | 3, 150 | 1, 411 | 18. 9 |
| Entre Rios | 3, 148 | 1, 412 | 18. 4 |
| San Luis | 2, 716 | 1, 637 | 16. 0 |
| Corrientes | 2, 588 | 1, 718 | 19. 7 |
| Jujuy | 2, 145 | 2, 072 | 14. 7 |
| Salta | 1, 672 | 2, 650 | 18. 5 |
| Catamarca | 1, 625 | 2, 736 | 20. 6 |

The mean largest yield was in Rio Negro, with 4,446 grams of fleece. Based on this yield were calculated the indicator numbers which appear in Table 2, column 3, in which Rio Negro has a basic indicator of 1,000, and the remaining States and Provinces higher numbers, indicating lower yields. The mean temperatures of the respective Provinces and States will be found in column 4 of Table 2, it being evident that there is a pronounced tendency to larger yields of wool with lower temperatures.

Chubut, which has a mean annual temperature of 10.1° C., should produce more wool per animal than any other southern region of the country, but, according to the statistics, Rio Negro and Buenos Aires produce more. This contradiction is owing, perhaps, to incomplete data during the first years, because the yield in Chubut in 1924–25 is the highest registered in the country, being 6,375 grams, which seems more logical.

A study of the influence of the atmospheric elements on the yield of wool in each Province and State of the country would be too extensive, consequently we shall consider only a limited number of these, choosing Corrientes, represented by the meteorological data of Con-